

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application including any Article 19 or 34 Amendments:

LISTING OF CLAIMS:

1. (currently amended) An information recording medium on which there are recorded:

content information; and

a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other,

at least one of the plurality fo button information being selected in accordance with the reproduction capability in performing the operation.

2. (original) The information recording medium according to claim 1, on which there is further recorded attribute information which indicates the reproduction capability, in association with said

button information.

3. (original) The information recording medium according to claim 1, wherein

there is further recorded play list information for defining reproduction sequence of said content information by a unit of item, on said information recording medium, and

said play list information includes: item information for specifying the item which constitutes said content information; and sub item information for specifying said button information corresponding to the item as a sub item.

4. (original) The information recording medium according to claim 2, wherein

said content information and said button information are multiplexed by a unit of packet, which is a physically accessible unit, and recorded on said information recording medium as an entire stream,

there is further recorded an object information file for storing correspondence definition information which defines a correspondence relationship between the entire stream and the plurality of packets which are multiplexed, as reproduction control information for controlling reproduction of the entire stream, and

said attribute information is included in said object

information file.

5. (original) The information recording medium according to claim 1, wherein said button information includes a plurality of button pages which can constitute the button menu and whose display can be changed to each other.

6. (original) The information recording medium according to claim 5, wherein at least one of the plurality of button pages includes button command information for defining the operation.

7. (original) The information recording medium according to claim 5, wherein at least one of the plurality of button pages includes button control information being associated with at least one button image information which is displayed and outputted as the button menu, and for displaying and outputting the button image information.

8. (original) The information recording medium according to claim 7, wherein the button control information includes at least one of button image number information which indicates association with the button image information, display position information which indicates a display position on the button menu of a button defined by the button image information, and near-by button information which indicates a change in a state of the button

caused by the operation.

9. (original) The information recording medium according to claim 1, on which there is further recorded reproduction control information for controlling such that the button menu is displayed, with it superimposed on or replaced by one portion of said content information, or is not displayed at all.

10. (currently amended) An information recording apparatus, comprising:

a first recording device for recording content information onto an information recording medium; and

a second recording device for recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other,

at least one of the plurality fo button information being selected in accordance with the reproduction capability in performing the operation.

11. (currently amended) An information recording method, comprising:

a first recording process of recording content information onto an information recording medium; and

a second recording process of recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other,

at least one of the plurality fo button information being selected in accordance with the reproduction capability in performing the operation.

12. (currently amended) An information reproducing apparatus for reproducing an [[said]] information recording medium on which there are recorded: content information; and a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said

content information, each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other, at least one of the plurality fo button information being selected in accordance with the reproduction capability in performing the operation ~~according to claim 1,~~

said information reproducing apparatus comprising:

a reproducing device for reproducing said content information and said button information recorded on said information recording medium;

a generating device for generating the button menu on the basis of said button information; and

a controlling device for controlling said generating device to generate the button menu according to the reproduction capability of said information reproducing apparatus.

13. (original) The information reproducing apparatus according to claim 12, wherein said reproducing device pre-loads said button information before reproduction of said content information.

14. (original) The information reproducing apparatus according to claim 12, further comprising a buffer memory for

storing the generated button menu.

15. (currently amended) An information reproducing method of reproducing an [[said]] information recording medium on which there are recorded: content information; and a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other, at least one of the plurality fo button information being selected in accordance with the reproduction capability in performing the operation ~~according to claim 1,~~

said information reproducing method comprising:

a reproducing process of reproducing said content information and said button information recorded on said information recording medium;

a generating process of generating the button menu according to the reproduction capability of said information reproducing apparatus, on the basis of said button information; and

a controlling process of controlling said generating process to generate the button menu according to the reproduction

capability of said information reproducing apparatus.

16. (currently amended) An information recording / reproducing apparatus, comprising:

a first recording device for recording content information onto an information recording medium;

a second recording device for recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information;

a reproducing device for reproducing said content information and said button information recorded on said information recording medium;

a generating device for generating the button menu according to the reproduction capability of said information recording / reproducing apparatus on the basis of said button information; and

a controlling device for controlling said generating device to generate the button menu according to the reproduction capability of said information recording / reproducing apparatus,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other,



at least one of the plurality of button information being selected in accordance with the reproduction capability in performing the operation.

17. (currently amended) An information recording / reproducing method, comprising:

a first recording process of recording content information onto an information recording medium;

a second recording process of recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information;

a reproducing process of reproducing said content information and said button information recorded on said information recording medium;

a generating process of generating the button menu according to the reproduction capability of said information recording / reproducing method on the basis of said button information; and

a controlling process of controlling said generating process to generate the button menu according to the reproduction capability of said information recording / reproducing method,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a

plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other,

at least one of the plurality fo button information being selected in accordance with the reproduction capability in performing the operation.

18. (currently amended) A computer program product for recording control to control a computer provided for ~~[[the]]~~ an information recording apparatus ~~according to claim 10,~~ said program making the computer function as at least one portion of ~~[[said]]~~ a first recording device and ~~[[said]]~~ a second recording device,

said information recording apparatus comprising:

said first recording device for recording content information onto an information recording medium; and

said second recording device for recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other,

at least one of the plurality fo button information being selected in accordance with the reproduction capability in performing the operation.

19. (currently amended) A computer program product for reproduction control to control a computer provided for ~~[[the]]~~ an information reproducing apparatus ~~according to claim 12,~~ said program making the computer function as at least one portion of ~~[[said]]~~ a reproducing device, ~~[[said]]~~ a generating device, and ~~[[said]]~~ a controlling device,

said information reproducing apparatus for reproducing an information recording medium on which there are recorded: content information; and a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other, at least one of the plurality fo button information being selected in accordance with the reproduction capability in performing the operation,

said information reproducing apparatus comprising:

said reproducing device for reproducing said content

information and said button information recorded on said information recording medium;

said generating device for generating the button menu on the basis of said button information; and

said controlling device for controlling said generating device to generate the button menu according to the reproduction capability of said information reproducing apparatus.

20. (currently amended) A computer program product for record / reproduction control to control a computer provided for ~~[[the]]~~ an information recording / reproducing apparatus ~~according to claim 16~~, said program making the computer function as at least one portion of ~~[[said]]~~ a first recording device, ~~[[said]]~~ a second recording device, ~~[[said]]~~ a reproducing device, ~~[[said]]~~ a generating device, and ~~[[said]]~~ a controlling device,

said information recording / reproducing apparatus, comprising:

said first recording device for recording content information onto an information recording medium;

said second recording device for recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said

content information;

said reproducing device for reproducing said content information and said button information recorded on said information recording medium;

said generating device for generating the button menu according to the reproduction capability of said information recording / reproducing apparatus on the basis of said button information; and

a controlling device for controlling said generating device to generate the button menu according to the reproduction capability of said information recording / reproducing apparatus,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other,

at least one of the plurality fo button information being selected in accordance with the reproduction capability in performing the operation.

21.(currently amended) A data structure including a control signal, comprising:

content information; and

a plurality of button information each of which is for defining a button menu which allows an operation as for said

content information, for each reproduction capability which is necessary to reproduce said content information,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes the button menu and whose display can be changed to each other,

at least one of the plurality fo button information being selected in accordance with the reproduction capability in performing the operation.